



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of: Alexandros Makriyannis et al

Application No.: 10/647,550 Examiner: Not Assigned

Filing Date: 08/25/2003 Group Art Unit: 1614

For: Alexandros Makriyannis et al

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Sir:

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Citations in bold type and having a name preceded with *1* indicate references which are believed to be more closely related to the claimed subject matter. This indication is not meant to indicate or imply any position with respect to the remaining references.

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Respectfully submitted,

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**INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION**

filed 6-20-2005

Application No. 10/647,550	Inventor Alexandros Makriyannis etal	
Title Novel Biphenyl and Biphenyl-like Cannabinoids		
Filing Date 08/25/2003	Group Art Unit 1614	Docket No. UCONEN/206/US

UNITED STATES PATENT DOCUMENTS

Examiner Initial-date	Document No.	Date	Name	Class
	09/701989	6/9/99	Makriyannis et al (copy not included, this is the U.S. National Phase of the Int'l Application published as WO 99/64389 enclosed herewith)	
	2004/0192667	3/1/04	Makriyannis et al	
	2004/0236101	10/28/02	Makriyannis et al	
	2004/0236116	7/11/02	Makriyannis et al	
	2005-0020679	1/27/05	Makriyannis et al	
	2005-0074408	8/25/03	Makriyannis et al	
	3946029	3/23/76	Descamps et al	
	5631297	5/20/97	Pate et al	
	5939429	8/17/99	Kunos et al	514
	6653304	11/25/03	Leftheris et al	
	6864291	3/8/05	Fride et al	
	6900236	5/31/05	Makriyannis et al	
	6903137	6/7/05	Fride et al	

FOREIGN PATENT DOCUMENTS

Examiner Initial-date	Document No.	Date	Country	Name	Translation
	EP0444451	9/4/91	EP	Sterling Drug (English bibliography, abstract and cover page, appears equivalent to US5068234 which is also cited)	
	EP0576357	12/29/93	EP	Barth et al (including English bibliography and abstract)	no
	IL1995-113228	9/22/99	IL	R. Mechoulam et al (abstract only)	
	WO 94/12466	6/9/94		Mechoulam et al	English
	WO 97/21682	6/19/97		Barth et al (including bibliography, appears equivalent to US5925768)	no
	WO 99/57106	11/11/99		Makriyannis et al, in English	

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	WO 99/64389	12/16/99		Makriyannis et al, in English	
OTHER DOCUMENTS					
Examiner Initial-date	(Include Author, Title, Publication Date, Pertinent Pages, Etc.)				
	1 *2* Archer et al; "cannabinoids, synthesis approaches to 9-ketocannabinoids."; J. Org. Chem.; vol. 42; no. 13; 2277-2284; (1977)				
	Beltramo M., Piomelli D; "Anandamide Transport Inhibition by the Vanilloide Agonist Olvanil"; Europeean J. of Pharmacology; (1999); 364(1); 75-78 (abstract only)				
	2 Brotchie JM: Adjuncts to dopamine replacement a pragmatic approach to reducing the problem of dyskinesia in Parkinson's disease. Mov. Disord. (1998)13:871-876. (abstract only)				
	Di Marzo, V., Bisogno, T., Melck, D., Ross, R., Brockie, H., Stevenson, L., Pertwee, R., DePetrocellis, L., "Interactions between synthetic vanilloids and the endogenous cannabinoid system"; FEBS Letters; (1998); 437(3); 449-454. (abstract only)				
	2 Dodd, P.R. et al, A Rapid Method for Preparing Synaptosomes: Comparison with Alternative Procedures, Brain Res., 226, 107 - 118 (1981). (abstract only)				
	2 Green K.; "Marijuana smoking vs. cannabinoids for glaucoma therapy."; Arch. Ophthamol. (1998) Nov. 116(11); 1433-1437. (abstract only)				
	Griffin, G., Wray, E. J., Tao, Q., McAllister, S. D., Rorrer, W. K., Aung, M., Martin, B. R., Abood, M. E.; "Evaluation of the cannabinoid CB2 receptor selective antagonist, SR144528: further evidence for cannabinoid CB2 receptor absence in the rat central nervous system"; European Journal of Pharmacology; (1999); vol. 377; 117-125.				
	Hanus et al; "Two new unsaturated fatty acid ethanolamides in brain that bind to the cannabinoid receptor"; Journal of medicinal Chemistry; 36(20); 3032-3034; 1993				
	Jbilo, O., Derocq, J., Segui, M., Le Fur, G., Casellas, P.; "Stimulation of peripheral cannabinoid receptor CB2 induces MCP-1 and IL-8 gene expression in human promyelocytic cell line HL60"; FEBS LETTERS; (1999); vol. 448; no. 21848; 273-277				
	2 Joy JE, Watson SJ, Benson JA; "Marijuana and Medicine Assessing the Science Base"; National Academy Press, Washington, DC, USA (1999). (abstract only)				

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	Title Novel Biphenyl and Biphenyl-like Cannabinoids		
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filed 6-20-2005			
	Lang, W., Qin, C., Hill, W.A., Lin, S., Khanolkar, A.D., Makriyannis, A.; High-Performance Liquid Chromatographic Determination Of Anandamide Amidase Activity in Rat Brain Microsomes; Anal. Biochem; (1996), 238, 40-45 (abstract only)		
	Lang, W. et al; "Substrate Specificity and Stereoselectivity of Rat Brain Microsomal Anandamide Amidohydrolase"; J. Med. Chem.; vol. 42(5); 896-902; (1999)		
	2 Maurer M, Henn V, Dittrich A, Hofmann A.; "Delta-9-tetrahydrocannabinol shows antispastic and analgesic effects in a single case double-blind trial."; Eur. Arch. Psychiat. Clin. Neurosci. (1990), 240:1-4. (abstract only)		
	Mechoulam et al; "Structural Requirements for Binding of Anandamide Type Compounds to the Brain Cannabinoid Receptor"; J. Med. Chem.; 40; 659-667 (1997)		
	1 Mechoulam et al; "Towards Cannabinoid drugs - Revisited"; Progress in Medicinal Chemistry; 35; 199-243; 7/3/1998		
	Melck, D., Bisogno, T., DePetrocellis, L., Chuang, H., Julius, D., Bifulco, M., DiMarzo, V.; "Unsaturated Long-Chain N-Acyl-vanillyl-amides"; Biochemical and Biophysical Res. Commun.; (1999); 262(1); 275-284 (abstract only) .		
	Melvin et al; "Structure-Activity Relationships Defining the ACD-Tricyclic Cannabinoids Cannabinoid Receptor Binding and Analgesic Activity"; Drug Design and Discovery; 13(2); 155-166 (1995). (abstract only)		
	Meschler, J. P., Kraichely, D. M., Wilken, G. H., Howlett, A. C.; "Inverse Agonist Properties of N-(Piperidin-1-yl)-5-(4-chlorophenyl)-1-(2,4-dichlorophenyl)-4-methyl-1H-pyrazole-3-carboxamide HCL (SR141716A) and 1-(2-Chlorophenyl)-4-cyano-5-(4-methoxyphenyl)-1H-pyrazole-3-carboxylic Acid Phenylamide (CP-272871) for the CB1 Cannabinoid Receptor"; Biochemical Pharmacology; (2000); vol. 60; no. 9; 1315-1322.		
	2 Muller-Vahl KB, Kolbe H, Schneider U, Emrich, HM Cannabis in movement disorders. Porsch. Kompicmentarmed (1999) 6 (suppl. 3) 23-27. (abstract only)		
	2 Muller-Vahl KB, Schneider U, Kolbe H, Emrich, HM.; "Treatment of Tourette's syndrome with delta-9-tetrahydrocannabinol." Am. J. Psychiat.; (1999); 156(3); 495.		
	Pacheco M, et al; "Aminoalkylindoles: Actions On Specific G-Protein-Linked Receptors"; J. Pharmacol. Exp. Ther.; vol. 257, no. 1, pp. 170-183 (1991).		
	1 *2* Palmer et al; "Natural and Synthetic Endocannabinoids and Their Structure-Activity Relationships"; Current Pharmaceutical Design; 6; 1381-1397; (2000)		

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	2 Pertwee et al; "Inhibitory effects of certain enantiomeric cannabinoids in the mouse vas deferens and the myenteric plexus preparation of guinea-pig small intestine"; Br. J. Pharmacol.; 105(4); 980-984 (1992). (abstract only)		
	Pinto et al; Cannabinoid Receptor Binding and Agonist Activity of Amides and Esters of Arachidonic Acid; Mol. Pharmacol.; 1994; 46(3); 516-522.		
	2 Porreca F., Mosberg H.I., Hurst R., Hruby V.J., Burks T.F.; "Roles of mu, delta and kappa opiod receptors in spinal and supraspinal mediation of gastrointestinal transit effects and hot-plate analgesia in the mouse"; J. Pharmacol. Exp. Ther.; 230(2); 341-348; (1994). (abstract only)		
	Quere, L., Boigegrain, R., Jeanjean, F., Gully, D., Evrard, G., Durant, F.; "Structural requirements of non-peptide neurotensin receptor antagonists"; J. Chem Soc., Perkin Trans. 2, (1996); 2639-2646.		
	Razdan et al; "Pharmacological and Behavioral Evaluation of Alkylated Anandamide Analogs"; Life Sci.; 1995; 56(23-24); 2041-2048		
	2 Rice AS. Cannabinoids and pain. Curr Opin Investig Drugs. 2001 Mar;2(3):399-414. (abstract only)		
	2 Serdarevich B., Caroll K.K., "Synthesis and characterization of 1- and 2-monoglycerides of anteiso fatty acids"; J. Lipid Res.; 7; 277-284; (1966)		
	2 Shen M. Thayer SA: Cannabinoid receptor agonists protect cultured rat hippocampal neurons from excitotoxicity. Mol. Pharmacol (1996) 54:459-462.		
	Sheskin, T. et al; Structural Requirements for Binding of Anandamide Type Compounds to the Brain Cannabinoid Receptor; J. Med. Chem.; 1997; 40; 659-667		
	2 Simiand J, Keane M, Keane PE, Soubrie P: SR 141716, A CB1 cannabinoid receptor antagonist, selectively reduces sweet food intake in marmoset. Behav. Pharmacol (1998) 9:179-181. (abstract only)		
	2 Terranova J-P, Storme J-J Lafon N et al; "Improvement of memory in rodents by the selective CB1 cannabinoid receptor antagonist, SR 141716"; Psycho-pharmacol (1996) 126:165-172 (abstract only)		
	Tetko, I. V. et al; "Volume Learning Algoritm Artificial Neural Networks For 3D QSAR Studies"; J. Med. Chem.; vol. 44, no. 15 (2001) pp. 2411-2420.		
	2 Ueda, N., Endocannabinoid hydrolases. Prostaglandins & Other Lipid Mediators 2002;68-69:521-534 (abstract only)		
	2 Vogel Z., Barg J., Levy R., Saya D., Heldman E., Mechoulam R.; "Anandamide, a brain endogenous compound, interacts specifically with cannabinoid receptors and inhibits adenylate cyclase"; J. Neurochem.; 61(1) 352-355; (1993) (abstract only)		

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	2 Wagner JA, Varga K, Jarai Z, Kunos G; "Mesenteric Vasodilation Mediated by Endothelia Anandamide Receptors"; Hypertension (1999) 33:429-434.		
Examiner	Date Considered		
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP §609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.			